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(21)Application number : 06-325605 (71)Applicant : NEC ENG LTD

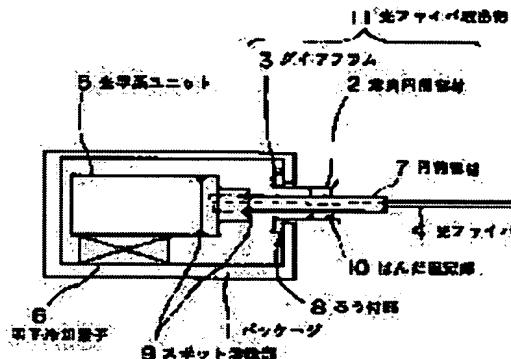
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## (54) SEMICONDUCTOR LASER MODULE STRUCTURE

## (57)Abstract:

PURPOSE: To prevent an electronic cooling element from decreasing in stability and light output due to the entry of moisture into a package and to prevent variation in the output due to a tensile and a compressive force that an optical fiber receives and the breaking of the optical fiber due to repetitive fatigue.

CONSTITUTION: The optical fiber lead-out part 11 of a package 1 consists of a thin cylindrical member 2 made of metal and a diaphragm 3 which is formed successively to this member. The outer peripheral part of the diaphragm 3 is soldered to the package 1 in a solder zone 8. The cylindrical member 7 where the optical fiber 4 is fixed is inserted into the optical fiber lead-out part 11 and heated with high frequency heating from the outside, so that the cylindrical member fixed to the thin cylindrical member 2 at a solder fixation part 10. An optical system unit where a semiconductor laser, a condenser lens, and the cylindrical member 7 are fixed is fixed to the package 1 across the electronic cooling element 6 and variation in ambient temperature, to which the package 1 is exposed, is coped with to perform control to be at a constant temperature.



## LEGAL STATUS

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